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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
HUNG, YUBIN	
ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/915,324	LLOYD-JONES, DANIEL JOHN	
	Examiner	Art Unit	
	Yubin Hung	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-23 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-23 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 27 July 2001 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 6.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, 5, 12, 17, 18, 23, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurokawa et al. (US 6,453,052), in view of Torres et al. (US 6,608,650).

3. Regarding claim 1, and similarly claims 12, 17, 18, 23, Kurokawa discloses:

- selecting a part of said object, said part having a distinctive color [Fig. 1, numeral 4; Fig. 2, numeral 32; Figs. 3 & 4; Col. 4, lines 19-42. Note that the object is a person and the selected part can be one or more of the face, hair or other regions. Note further that each face region or hair region has a distinctive color]
- searching said target image for said part [Fig. 1, numeral 4; Fig. 2, numeral 32. Note that extraction implies searching]

Kurokawa does not expressly disclose the following

- tagging the target image if said part is found therein

However, in lines 55-60 of Col. 11 Torres teaches/suggests tagging images which are categorized as an image of a person, etc.

Kurokawa and Torres are combinable because they both have aspects that are from the same field of endeavor of image processing.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Kurokawa with the teachings of Torres by tagging images where a selected part is found. The motivation would have been to categorize the images so that different operations may be applied during subsequent processing.

Therefore, it would have been obvious to combine Torres with Kurokawa to obtain the invention of claim 1.

4. Regarding claim 2, Kurokawa further discloses that said object is a person and said part is a fashion accessory worn by the person. [Fig. 4, numeral 42; Col. 4, lines 37-39. Note that wigs and toupees, which are fashion accessories, are considered as hair.]

5. Regarding claim 5, Kurokawa further discloses extraction of multiple parts. [Figs. 3 & 4; Col. 4, lines 19-42. Note, for example, face and hair regions have distinct colors.] Note that it is an obvious extension of claim 1 to tag an image if the number of interested parts it contains is greater than one.

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6. Claims 3, 4, 13, 14, 19, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurokawa et al. and Torres et al. (US 6,608,650) as applied to claims 1, 2, 5, 12, 17, 18, 23 above, and further in view of Isadore-Barreca et al. (US 6,205,231).

7. Regarding claim 3, and similarly claims 13 and 19, the combined invention of Kurokawa and Torres teaches/suggests all limitations except the following:

- wherein said selecting step comprises manual provision of designation information, in relation to an indicative image, said designation information identifying said part of the object

However, in [Fig. 1, numerals 36, 52; Fig. 2; Col. 7, lines 8-12; Col. 9, lines 1-8] Isadore-Barreca teaches/suggests an operation with which a user places tags (i.e., designation information) around the borders (i.e., parts) of an object.

Kurokawa, Torres and Isadore-Barreca are combinable because they all have aspects that are from the same field of endeavor of image processing.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the combined invention of Kurokawa and Torres with the teachings of Isadore-Barreca by manually providing information to identify parts of interest from an image.

The motivation would have been to offer users with options to make the system user friendly.

Therefore, it would have been obvious to combine Isadore-Barreca with the combined invention of Kurokawa and Torres to obtain the invention of claim 3.

8. Regarding claim 4, and similarly claims 14 and 20, Torres further discloses the use of a menu. [Fig 2A, numeral 414; Fig. 3, numeral 373; Col. 5, lines 55-58; Col. 6, line 65 – Col. 7, line 8.]

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9. Claims 6, 10, 16, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurokawa et al. and Torres et al. (US 6,608,650) as applied to claims 1, 2, 5, 12, 17, 18, 23 above, and further in view of Dimitrova et al. (US 6,754,389).

10. Regarding claim 6, the combined invention of Kurokawa and Torres teaches/suggests all limitations except the following:

- searching said target image for human skin colour
- the tagging step comprises tagging the target image if both said part and said skin colour are found therein

However, in [Fig. 3, numeral 330; Col. 8, lines 15-23] Dimitrova teaches/suggests the extraction of skin tone. In addition, per the analysis of claims 1 and 5, images are tagged after multiple parts (e.g., face and hair) are detected.

Kurokawa, Torres and Dimitrova are combinable because they all have aspects that are from the same field of endeavor of image processing.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the combined invention of Kurokawa and Torres with the teachings of Dimitrova by also searching facial skin color. The motivation would have been to facilitate the detection and location of the face, and hence the head and the body, of a person in an image, since facial skin color is a stronger indicator of the presence of a face in an image.

Therefore, it would have been obvious to combine Dimitrova with the combined invention of Kurokawa and Torres to obtain the invention of claim 6.

11. Regarding claim 10, and similarly claims 16 and 22, the combined invention of Kurokawa and Torres teaches/suggests all limitations except the following:

- colour segmenting said target image into at least one colour region and determining whether said distinctive color matches said at least one colour region

However, in [Fig. 3, numeral 330; Col. 8, lines 15-23] Dimitrova further teaches/suggests extraction of portions of the image containing flesh color (i.e., the distinctive color), which inherently segments the images into flesh- and non-flesh-color portions.

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12. Claims 7-9, 15, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurokawa et al. and Torres et al. (US 6,608,650) as applied to claims 1, 2, 5, 12, 17, 18, 23 above, and further in view of Platt ("AutoAlbum: Clustering Digital Photographs using Probabilistic Model Merging," *Proc. IEEE Workshop on Content-based Access of Image and Video Libraries*, June 16, 2000, pp. 96-100).

13. Regarding claim 7, and similarly claims 15 and 21, Platt teaches/suggests:

- deriving meta-data for a core set of images and grouping said core set into one or more event image sets dependent upon said meta-data [P. 97, left column, Sect. 2.1, 2nd & 3rd paragraphs]
- choosing a desired image set, comprising an indicative image and at least one target image, from said one or more event image sets [P. 99: Conclusion, lines 1-4. Note that one of the images is considered the indicative image and the rest the target images]

Kurokawa, Torres and Platt are combinable because they all have aspects that are from the same field of endeavor of image processing.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the combined invention of Kurokawa and Torres with the teachings of Platt by grouping images based on their creation time (i.e., meta-data) choose one of the groups (for viewing or further processing). The motivation would have been because temporally related images are almost always semantically related [Platt: P. 97, left column, Sect. 2.1, 3rd paragraph, last two lines].

Therefore, it would have been obvious to combine Platt with the combined invention of Kurokawa and Torres to obtain the invention of claim 7.

14. Regarding claim 8, and similarly claim 9, Platt further discloses

- wherein said meta-data comprises time stamps associated with the images in the core set, and said grouping step comprises, in relation to an image in said core set a sub-step of: assigning said image to an event if an associated time stamp falls within a predetermined event time interval
  [P. 97, left column, Sect. 2.1, 3rd paragraphs. Note that lines 3-5 indicates the existence of a time interval]

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15. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurokawa et al., Torres et al. (US 6,608,650) and Dimitrova et al. (US 6,754,389) as applied to claims 6, 10, 16 and 22 above, and further in view of Cosatto et al. (US 6,118,887).

16. Regarding claim 11, the combined invention of Kurokawa, Torres and Dimitrova teaches/suggests all limitations except the following:

- `determining whether a size and a shape of said region matches the distinctive size and shape`

However, in [Fig. 4, numeral 62; Col. 12, lines 41-51] Cosatto teaches/suggests using size and shape to determine whether a region represents a face (i.e., the part in question).

Kurokawa, Torres, Dimitrova and Cosatto are combinable because they all have aspects that are from the same field of endeavor of image processing.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the combined invention of Kurokawa, Torres and Dimitrova with the teachings of Cosatto by also using size and shape features of a human face to detect the presence of a face in an image. The motivation would have been because both size and shape are features of a face and using multiple features can improve the accuracy of face detection.

Therefore, it would have been obvious to combine Cosatto with the combined invention of Kurokawa, Torres and Dimitrova to obtain the invention of claim 11.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Agnew (US 6,583,792) – Method and System for accurately displaying superimposed images (e.g., a pair of eyeglass over a face)
- Fellinger (US 5,699,442) – locates object of predetermined color in an image and outputs its location (i.e., "tagging")
- Steffens et al. (US 6,301,370) – a marked (i.e., "indicative") is matched against with a gallery of tagged images ("target" images) to locate similar face
- O'Brill et al. (US 5,937,081) – an image compositing system that enables a real subject (e.g., images of accessory items) to be incorporated into user-selected images
- Weaver (US 6,404,426) – method and system for a computer-rendered 3-D mannequin
- Rom (US 6,307,568) – method and system for virtual dressing over the Internet

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yubin Hung whose telephone number is (703) 305-1896. The examiner can normally be reached on 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Yubin Hung
Patent Examiner
September 3, 2004

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